Research Matters

The Language Zone: Differentiating writing instruction for students who are d/Deaf and hard of hearing

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Abstract

Interactive Writing (IW) is a powerful support for language and literacy development; however, its emphasis on using oral language to construct written language can present challenges for deaf/Deaf and hard of hearing (d/Dhh) students due to their unique and diverse language experiences. Teachers (n = 14) using Strategic and Interactive Writing Instruction (SIWI) with grade 3–5 d/Dhh students in a variety of settings were observed using a space referred to as 'the language zone' to address the unique language and literacy needs of d/Dhh students. The language zone is the designated space in a classroom where the creation, translation and revision of ideas is made visible. Researchers developed a flowchart with three tiers to document the three purposes for which the teachers use the space. Accompanying scenarios provide concrete examples of three distinct ways in which the language zone can be used. Teachers can use this language zone flow chart as a tool to recognize, analyze and select instructional moves that have the potential to positively impact the language and literacy proficiencies of d/Dhh students.

KEYWORDS: INTERACTIVE WRITING; WRITING INSTRUCTION; DEAF EDUCATION

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Introduction

Researchers have long highlighted the need to apply evidence-based approaches to writing instruction for students who are [1]d/Deaf and hard of hearing (d/Dhh). Yet, the majority of the research base for effective writing instruction and intervention is based on studies of hearing children, with or without disability labels. Therefore, existing interventions often fail to account for the unique language and literacy needs of d/Dhh students. In this article we describe an approach that enhances the power of Interactive Writing (IW) instruction, an evidence-based approach for typically developing students, that is specifically designed to engage and support d/Dhh learners. We begin by providing a brief historical overview of IW instruction as it is often used in contemporary general education classrooms. Then, we describe evidence of the unique language and literacy development of d/Dhh students from a series of recent studies related to Strategic and Interactive Writing Instruction (SIWI) with d/Dhh students. Finally, we present the language zone in the form of a flowchart, which illustrates the teacher decision making process when responding to d/Dhh students' various language needs in the context of IW. We conclude by illustrating examples of the language zone in use and discussing the implications of this approach for d/Dhh learners.

Overview of Interactive Writing

Approaches to IW have been inspired by early iterations of the language experience approach (Ashton-Warner, 1963) and McKenzie's (1985) 'shared writing' instruction. In both cases, students are assumed to develop writing skills by engaging in the process of writing alongside a teacher or peer. In a language experience approach, students are encouraged to write about their experiences by using the language they have developed through experience. In the case of shared writing, students and teachers 'share' the pen – with one generating and the other recording ideas in order to demonstrate how oral language can be translated into written language. Evidence of both approaches exist in the common literacy practice of engaging with a 'Morning Message' (e.g., Englert and Dunsmore, 2002; Mariage, 2001) in which students co-construct written messages based on student ideas.

Though IW can take several different forms, it is a socially mediated approach to instruction that involves guided, interactive writing experiences in which students develop as writers by engaging in writing (Englert, Raphael, and Anderson, 1991; Vygotsky, 1962, 1978). These core ideas have combined practices aimed at apprenticing students as writers by giving students a more active role in the writing process (e.g., sharing the pen

instead of having a scribe) as they are guided by a more expert peer or teacher writer (e.g., McCarrier, Pinnell, and Fountas, 2000). They have also been combined with Self-Regulated Strategy Development (SRSD; see Graham and Harris, 1989) and Cognitive Strategy Instruction in Writing (see Englert *et al.*, 1995; Englert and Mariage, 1991; Olson and Land, 2007), two approaches designed to more explicitly expose students to the strategies and processes of skilled writers with the intention that they will take on and incorporate the strategies into their own repertoire of writing approaches.

IW can be incorporated at every step of the writing process, from generating ideas and brainstorming, to outlining, drafting, revising, editing, and publishing. IW is currently used as a component of many popular frameworks for literacy instruction. For example, IW is a vital component of a 'balanced literacy framework' (Fountas and Pinnell, 2001) in which it serves as the guided portion of a writing lesson built around a gradual release of responsibility for writing. IW is also used during the mini-lesson portion of writer's workshop lessons (Calkins, 1994) when students co-construct text for a class writing piece using a skill or strategy first modeled by the teacher or in a mentor text.

IW instruction has effectively promoted reading, writing and language development in studies that included as little as 10 minutes per day as well as those that included IW as a large part of a comprehensive literacy framework (Craig, 2003, 2006; Jones, Reutzel, and Fargo 2010; Roth and Guinee, 2011; Wall, 2008). Researchers theorize that IW influences student achievement in three main ways: First, it builds on students' existing oral competence to support their written language proficiency by allowing students to express ideas orally and then work together to represent these expressions in writing. Second, as students engage in planning and negotiating how to represent ideas in writing, the teacher can insert information about conventions of print, spelling syntax, and genre structures in the context of messages that matter to students. This generates both declarative and procedural knowledge for constructing and revising written language that follows genre- and audience-specific conventions (see Dostal, Bowers, Wolbers, and Gabriel, 2015; Dostal and Wolbers, 2014, 2016; Wolbers *et al.*, 2015).

Finally, IW provides writing instruction 'at the point of student need' (Button, Johnson, and Furgeson, 1996: 447) in the context of authentic writing activity, rather than as isolated skill lessons that fail to transfer to independent writing (Button, Johnson and Furgeson, 1996). As such, IW has been proven to be a powerful support for language and literacy development across contexts within a range of instructional frameworks. Its emphasis on translating oral into written expression, however, can present

challenges for students who are d/Dhh because of their unique and diverse language experiences (e.g., students who use a manual form of communication and need to attend to translation between languages and modes; students who experience a language delay due to insufficient and/or inaccessible language input). For example, Williams (2011) has demonstrated that an adapted form of IW has the potential to support early writing development of kindergarten d/Dhh students.

In addition, Strategic and Interactive Writing Instruction (SIWI; Wolbers, 2008) is an approach to IW that incorporates strategy instruction (Graham and Perin, 2011, Graham, McKeown, Kiuhara, and Harris, 2012; Scardamalia and Bereiter, 1986) and attention to developing linguistic competence and metalinguistic knowledge (Ellis *et al.*, 2009; Krashen, 1994; Parasnis, 2009; Wolbers, 2010; Wolbers, Graham, Dostal, and Bowers, 2014; Wolbers, Bowers, Dostal, and Graham 2012–2015). Researchers have demonstrated that SIWI supports the writing and language development of elementary and middle grades d/Dhh students (Dostal and Wolbers, 2014, 2016; Wolbers, Bowers, Dostal, and Graham, 2013; Wolbers, Dostal, and Bowers, 2014; Wolbers, Graham, Dostal, and Bowers, 2013; Wolbers *et al.*, 2012, 2018). In the section that follows we describe aspects that are unique to the literacy development of d/Dhh students.

The literacy development of D/Dhh students

The population of children with hearing loss is diverse with respect to the severity of their hearing loss, the modality and languages of their early communication, and their wide range of educational experiences. Therefore, tremendous language diversity exists among d/Dhh students (Parasnis, 1998), and these diverse language experiences impact writing (e.g., Dostal and Wolbers, 2016; Wolbers, Graham, Dostal, and Bowers, 2014). D/Dhh students demonstrate a broad range of English proficiencies or other spoken languages (Easterbrooks and Beal-Alvarez, 2012) and, among those who have been exposed, a broad range of proficiency in American Sign Language (ASL). Recently, the IES-funded Center on Literacy and Deafness has highlighted the importance of child-by-instruction interactions (Easterbrooks *et al.*, 2015), and recent research on reading indicates there are differences in the nature of early literacy skills when examining d/Dhh children with functional hearing (who resemble hearing readers) and other d/Dhh children, especially those who sign (who draw upon unique sublexical skills and language; Lederberg *et al.*, 2015).

Some students would benefit from greater metalinguistic knowledge or translation strategies (Evans, 1998). Other students, however, may need instructional approaches that spur further development of a primary

expressive language. It is essential, then, that any writing intervention used with d/Dhh students flexibly responds to students' various language competencies and characteristics.

English enrichment

Like all students, d/Dhh students need explicit instruction on the conventions of written language, the impact of word choice, genre-specific language patterns, and phrase structures (e.g., De Oliveira and Schleppegrell, 2015; Schleppegrell, 2013). Research on IW has demonstrated that IW activities effectively address each of these learning goals for English users by: engaging students in collaborative discussion; challenging students beyond their current level of expression with the teacher providing model language above their independent level; exploring new language and structures present in model text; and co-constructing text with a gradual release of responsibility for engaging in the writing process. D/Dhh students with well-developed English proficiency may make contributions during IW lessons that are already comprehensible in English and only need the kind of enrichment and refinement that IW lessons include (e.g., revising word choice, punctuation, elaborating, or using a new phrase structure). These contributions may be written, oral or signed.

Developing metalinguistic awareness

Some d/Dhh students come to the task of writing in English with ideas that are first or best expressed in ASL. D/Dhh children who acquire and use ASL as a primary form of communication can mirror the struggles of other children who develop English as a second language (L2). L2 learners tend to draw on their existing linguistic repertoires and grammars when engaged in literacy activity (Durgunoglu, 1997) and have been known to embed L1 (primary language) features in L2 writing (Baker and Jones, 1998; Bhela, 1999; Hedgcock, 2012; Hinkel, 2002; Valdes, 2006). This phenomenon suggests that L2 writers may use L1 to generate or communicate ideas prior to or during production of text (Woodall, 2002). As writers gain competence in L2 and build linguistic awareness, the L1 features in their writing tend to fall away (Baker and Jones, 1998).

Children who are exposed to two languages prior to reaching fluency in one are engaged in bilingual language acquisition, whereby L1 and L2 are developing simultaneously at similar or dissimilar rates. This is the case for many d/Dhh children simultaneously exposed to ASL and English. The child may apply knowledge of one language to his/her productions in the other and vice versa (Hulk and Muller, 2000) during bilingual language development. Incidents of cross-linguistic influence have occurred among

d/Dhh writers, whereby structures of ASL are identified in their writing (Menéndez, 2010; Niederberger, 2008; Wolbers, Graham, Dostal, and Bowers, 2014; Wolbers, Bowers, Dostal, and Graham 2013–2015). Such is the case with the following expression that is written following ASL syntax exactly as it is signed in ASL: *Night yesterday buy movie DVD* (grade 7; Wolbers, 2010). This 5th grade student's written expression includes a rhetorical question as used in ASL: *snake food what rat and egg* (Wolbers, Dostal, and Graham, 2013). ASL may present in a student's writing at the phrase or sentence level as in the above examples or with the insertion of one signed word, e.g., *We grew up together since 11 years* (Wolbers, Graham, Dostal, and Bowers, 2014).

Students who are working between two languages often need support developing metalinguistic awareness – awareness of various language structures and how they differ between languages. Engaging in translation activities where languages are compared and contrasted develops meta-linguistic awareness (Bialystok, 1988, 2007), which will eventually support independent translation and/or code-switching between how one might think, say or sign the idea and how they would write it.

Developing a primary expressive language

Some students may come to IW instruction without a fully developed language for communication. Depending on factors such as level of hearing loss or benefit received from amplification or cochlear implants, d/Dhh children may not have acquired spoken language. Some students may not have developed English or ASL because of lack of exposure to ASL. Others experience a delay in expressive language because they use a contrived signing system that does not include features of a full language (e.g., grammatical structure, syntax).

When d/Dhh children lack full access to spoken language, they are inhibited in fully acquiring the language as most children do through meaningful and natural conversation with proficient users of the language (Jackendoff, 1994). As a result, they may exhibit simplified, confused, or fragmented constructions of language that can ultimately appear in their writing, as in the following examples. A 4th grade deaf student in a listening and spoken language program writes: *I want a new dogs, I take a pet store. My dad to show me what kind a two pet puppy. I will choose black or white dogs, because, I want to play with my dogs.* (Wolbers, Graham, Dostal, and Bowers, 2014). Unconventional language forms and confusing constructions have been known to persist in the writing of older students because they have not had sufficient access to spoken English and their

literacy instruction has not taken this into account. For example, an 8th grade deaf student who uses speech and listening writes: *The student wants or won't support email address and prinpcal refusal to tell all Student, because princpal decide to tell them's parent then parent told his/her son or Daughter* (Dostal, 2011). This example demonstrates confusion about specific vocabulary as well as English syntax that is not likely to be found among hearing writers of the same grade level and is likely due to compromised access to spoken English.

Some students are exposed to versions of English-based sign systems such as Signing Exact English or Pidgin Signed English when spoken language is not fully accessible. The intent of these communication methods is to provide a visual route for acquiring English; however, there remain aspects of English that are difficult to acquire through a visual mode (Power, Hyde, and Leigh, 2008; Schick and Moeller, 1992; Wolbers, Dostal, and Bowers, 2012). Children who rely heavily on English-based sign (and are less able to supplement expressions with speech-reading or use of their residual hearing) may struggle to put the language pieces together, as seen in the following 3rd grade example: *My Dad, Aunt and me went to hostie {hospital} for arm. I'm not here one week. It not working for head ... than sleep can't wake up yet. We fishised hostie went home can't coming back school* (Wolbers, Dostal, and Graham, 2012–2015). This example demonstrates confusion both in the word-level errors (hostie for hospital) and sentence-level, syntactical errors.

Such writing difficulties are compounded further if children have experienced extreme language deprivation. It is common for d/Dhh students to exhibit language deprivation because of a number of educational conditions that prolong lack of exposure to accessible language (cf. Lederberg and Spencer, 2001; Singleton, Morgan, DiGello, Wiles, and Rivers, 2004). In these cases, students' attempts at written language tend to be even more fragmented and confused as in the following examples: (1) *bulldoG is on Fool bad* (5th grade student; Wolbers, Dostal, and Graham, 2015); (2) *I ltok etq. I have goob* (3rd grade student; Wolbers, Dostal, and Graham, 2012–2015); (3) *I want be need do know* (middle school student; Wolbers, 2010). Or, students draw detailed pictures to convey their messages or write strings of letters, as seen in the following writing samples of 3rd through 5th grade d/Dhh students (Figure 1). These images are examples of writing samples that are difficult to interpret not only because recognizable English words or phrases are out of order, but because symbols (letters) and spaces are used in ways that do not represent conventional word patterns in English.
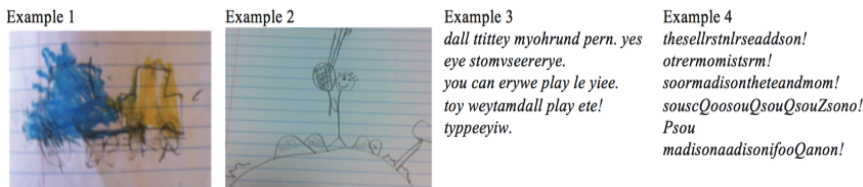
Example 1   Example 2   Example 3

dall ttittey myohrund pern. yes
eye stomvseererye.
you can erywe play le yiee.
toy weytamdall play ete!
typpeeyiw.

Example 4

thesellrstnlrseaddson!
otrermomistsrm!
soormadisontheteandmom!
souscQoosouQsouQsouZsono!
Psou
madisonaadisonifooQanon!

Figure 1: Writing samples of severely language deprived d/Dhh students

In the section that follows, we describe how the work in a language zone augments IW instruction by considering students' diverse language experiences and proficiencies.

The language zone

IW is based on the implicit assumption that students can produce comprehensible English utterances (either oral or written) that can be used to collaboratively construct a written message. However, teachers working with d/Dhh students with diverse language backgrounds and proficiencies cannot often make this assumption. Therefore, teachers and researchers involved in the development and refinement of SIWI as part of a three-year Institute of Education Sciences-funded Goal 2 Development Grant (Wolbers, Dostal, and Graham, 2012) documented a strategy for creating bridges between students' contributions – which come in many forms and modalities – and English text. This strategy was documented based on our work with 14 teachers in grades 3–5, working in school settings that represent a range of language approaches, including classrooms that use: listening and spoken language, total communication and bilingual (ASL/ English) approaches to instruction. In the sections that follow, examples from participating classrooms are included to illustrate the application of this strategy. The examples are transcripts from videotaped classroom interactions that were collected throughout the academic year using ThereNow® InSight Duo camera systems that used two lenses to capture one view of students and one view of the teacher/writing space.

This strategy involves the use of a designated space in the classroom within which creation, translation and revision of ideas are made visible. Researchers refer to this as 'the language zone'. Students and teachers represent ideas in the language zone in whatever form they need to create shared understanding, including drawing, gesturing, or using videos. If students cannot yet clearly represent their ideas in an expressive language, they engage with the teacher and their peers to build shared understanding

of an idea in the language zone using the communicative resources they have; these may include words and signs, but also gesture, role-play and other work with images.

This space represents a way to work with language that addresses the unique language and literacy needs of d/Dhh students. In order to build shared understanding and make the processes of translation, elaboration and revision accessible, teachers engage in the decision-making process represented by the language zone flowchart to guide their instructional interactions. The flowchart illustrated below represents this decision-making process and explains how teachers use the language zone to facilitate student language development during IW.

The language zone flowchart

The language zone flowchart illustrates how teachers make decisions about instructional options based on students' language needs. The flowchart includes the linguistic and metalinguistic processes supported in the language zone: building shared meaning, translating between languages, and providing English enrichment. The flowchart illustrates that teachers make a series of decisions based on students' contributions of ideas during IW. The first decision is whether or not the contribution is clearly conveyed. If it is, the next decision is whether the contribution contains ASL features (and therefore must be translated) or not. If not, a contribution is clearly conveyed in a close approximation of English and can be added directly to the English board where it will be revised and edited.

The **top tier** of the flowchart outlines tasks and instructional options for enriching English writing through revising and editing how the idea is expressed and how it can be enriched and expanded. This tier describes tasks and instructional options that are most similar to those found in typical IW lessons, whereby each of the tasks (i.e., expressing in English or enriching and expanding the English expression) can be taught by engaging in one of the five instructional options listed on the top tier of the flowchart. For example, a teacher might opt to enrich the written message by adding figurative language. They may also opt to expand the written message by providing options for additional phrases. See Figure 2 for additional instructional options for English elaboration and enrichment.

If, on the other hand, the student's initial contribution is clearly conveyed, but it contains ASL features, instruction would proceed starting at the **middle tier** of the flowchart. On the middle tier, the teacher would focus on two tasks: guiding the student to express the idea fully in ASL and heightening metalinguistic awareness of ASL and English to facilitate the eventual translation of the message.
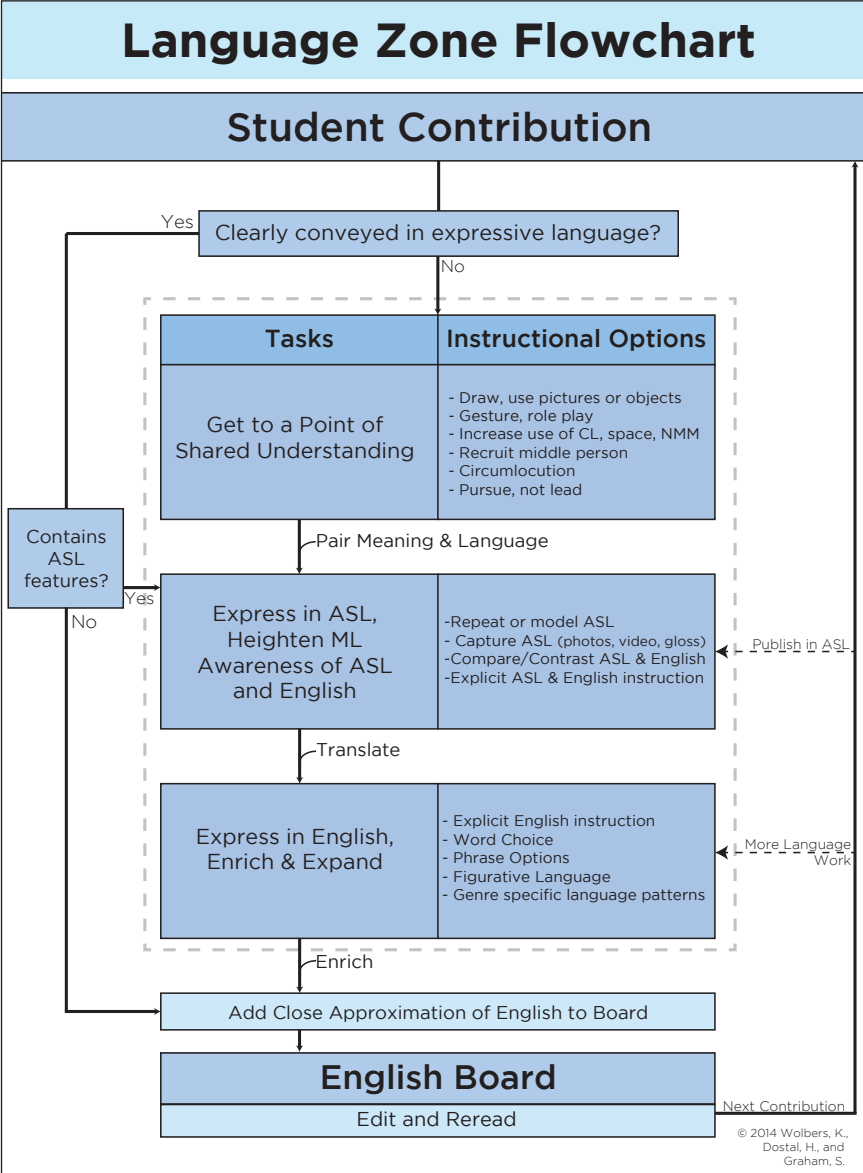
Language Zone Flowchart

Student Contribution

Clearly conveyed in expressive language?

Yes

No

Contains ASL features?

Yes

No

Tasks	Instructional Options
Get to a Point of Shared Understanding	- Draw, use pictures or objects - Gesture, role play - Increase use of CL, space, NMM - Recruit middle person - Circumlocution - Pursue, not lead
Express in ASL, Heighten ML Awareness of ASL and English	-Repeat or model ASL - Capture ASL (photos, video, gloss) -Compare/Contrast ASL & English -Explicit ASL & English instruction
Express in English, Enrich & Expand	- Explicit English instruction - Word Choice - Phrase Options - Figurative Language - Genre specific language patterns

Pair Meaning & Language

Translate

Enrich

Publish in ASL

More Language Work

Add Close Approximation of English to Board

English Board

Edit and Reread

Next Contribution

Figure 2: Language zone flowchart.

Once an idea is fully expressed in ASL, students translate the message into English and engage in the tasks on the top tier of the flowchart. Again, teachers have a number of options when it comes to supporting a message conveyed using ASL, and each of these options works to build metalinguistic awareness. For example, a teacher might choose to capture the student contribution using video, pictures or gloss in the language zone. Then, she might compare and contrast how the idea would be signed or written in English to demonstrate the process of translation and reinforce students' awareness of the structure of each language. On the other hand, she might decide to simply repeat or model the contribution in ASL before comparing and contrasting the two languages. Either way, the teacher's goal within the middle tier is to build metalinguistic awareness as a student's contribution is translated into English for later expansion (see Figure 2).

Once a message has been fully expressed in ASL, and the bridges between ASL and English have been discussed, students move to the top tier of the language zone to express the contribution in English so that it can be enriched and expanded, and finally added to the English board. If an idea was contributed in ASL originally, it is important to return to the original ASL as constructed with teacher support in the middle tier and 'publish' the contribution in ASL as well as English. This not only indicates that both languages are valid and valued, but reinforces the connections and contrasts between ASL and English, thus building students' metalinguistic awareness. As Dostal and Wolbers (201, 2016) have demonstrated, this focus on metalinguistic awareness has supported language development in ASL and English simultaneously – leading to increased proficiency in both languages.

In some cases, students' offered contributions are not clearly conveyed in either ASL or spoken language. In this case, teachers cannot begin by expanding or enriching English. Likewise, they cannot build on the ASL contribution by enriching the ASL and translating to English. Instead, if a teacher decides a contribution is *not* clearly conveyed in expressive language, they begin at the **bottom tier** of the flowchart.

On the bottom tier, the main task is to get to a point of shared understanding where the class and teacher understands the idea the student is attempting to contribute. In order to accomplish this task, the teacher has several instructional options. For example, they might invite the student to draw, use pictures/objects, or role-play to convey their idea. The teacher might use more accessible features of ASL (e.g., ASL classifiers (CL), non-manual markers (NMM), gesture) to clarify the *meaning* of the student's contribution. Instructional options on this tier are listed in descending order of transparency in the language zone flowchart above. That is, the

more proficient the initial contribution, the lower on the list you might begin with the least transparent instructional options.

Some students have very little language proficiency, or proficiency in a communication system that is not shared across the class, and must begin to build shared understanding by engaging in or watching role-playing, using objects or pictures to communicate. This situation might warrant an option higher on the list of options because the initial contribution was not clear to the group and requires more negotiation to come to shared understanding. Other students have stronger or further emerging language proficiencies that can be elaborated by recruiting a middle person (a peer who knows about the topic or event) to assist in expressing the idea; inviting the student, teacher or a peer to say more about the initial contribution in order to elaborate (circumlocution); or pursuing the idea via teacher questioning in a way that does not lead the student to a particular meaning, but leaves room for them to articulate their own. In some cases, the teacher might use more than one instructional option as they work to generate shared understanding about the student's contribution. Once students and the teacher have arrived at a point of shared understanding, the goal is to pair language and meaning in a way that models how initial ideas can be expressed in ASL or English. If expressed in ASL, the class then moves to the middle tier. From there, the ASL is refined and compared to English to facilitate translation and the class moves to the top tier. Once at the top tier, the task is to enrich and elaborate the written English by editing and revising until it is ready for publication.

Examples of classroom interactions including students working at each tier of the flowchart are described below.

Three students in the language zone

In this section we describe how instruction in the language zone can support the language and literacy development of three students with diverse profiles as writers and language users. Using examples from an Institute of Education Sciences-funded Goal 2 Development grant (Wolbers, Dostal, and Graham, 2012–2015), we demonstrate how a teacher responds to a student's initial contribution using instructional moves represented in one of the three tiers of the language zone flowchart.

Scenario 1, top tier

The first example is drawn from a lesson in which a 5th grade student contributed an idea that was already a close approximation of English. The interaction below demonstrates how the teacher worked at the top tier of the language zone flowchart, aimed at English enrichment, as she guided the elaboration and revision of the text.

Transcript 1	Language Zone
1 Teacher (T), using spoken English: Look here when it says 'my sister and I try to build'… do you see that? [Uses an interactive whiteboard highlighter pen to highlight a sentence.] This is what's really interesting. What is the 'meat' of the sentence, meaning the full idea? What's the full idea? What do you think, Angie?	1-2 The teacher transitioned from the *English board,* in which the students had been editing and revising their work, back to the *top tier* in order to provide *explicit English instruction* on complex sentences.
2 Student (S) 1: [Reads from the interactive whiteboard:] ''My sister and I tried to build in the sand.''	
3 T: Did you hear what she said? She said… what'd she say, Roberto?	
4 S2: Her sister and her.	
5 T: Yeah, you can use the words…	
6 S2: My sister and I?	
7 T: Uh huh	
8 S2: …try to a to build in the sand.	
9 T: Yes, and let's read it together.	
10 Students (Ss): ''My sister and I tried to build in the sand.''	
11 T: Look at what she did, look, she said [Reads from the interactive whiteboard:] ''…one day when it was warm.'' And we specify 'one day when it was warm' because you didn't get to build in the sand every day, did you? 'Cause I saw pictures of Angie (S1) in a coat! So, it was chilly, it wasn't warm. So watch this… [Points to the text on the interactive whiteboard.]	11 The teacher guided the students through identifying the parts of a sentence and provided them with *explicit instruction* about how to develop a cohesive complex sentence.
12 T: 'One day when it was warm' is a dependent clause. And we'll talk more about that. But it gives us information. It tells us when, it tells us about the weather. So watch this, I'm going to do control cut [on the computer], and we can do a couple of things. [Moves the dependent clause from the end of the sentence to the front.]	
13 T: We could even put it in front [indicates the beginning of the sentence]. So see what you think about this, but we don't want a	
period; we'll separate it by a comma because it's extra information, it *depends* on that [Points to the independent clause.]. See, [Points to the text on the interactive whiteboard:] 'One day when it was warm'- what do I need to do to 'my'?	
14 S2: Cap, uh, a capital letter. [Removes the capital letter from 'M' in 'my'.]	14-18 After *enriching* the student-created text through the use of complex sentences, the teacher transition to the *English board* and worked with the students to make a few minor edits.
15 T: Yes, let's read it; let's read it. [Ss and T read the text together:] ''One day when it was warm, my sister and I tried to build in the sand.'' Do you like that, or do you want it back the other way?	
16 S1: I like that.	
17 T: Do you like that?	
18 S2: Yeah.	

Scenario 2, middle tier

The next example is drawn from a different classroom in which a third grade student contributed an idea that included ASL features. The interaction below demonstrates how the teacher worked at the middle tier of the language zone flowchart, focusing on making explicit comparisons between how the idea would be expressed in ASL and in English in order to develop metalinguistic awareness (and greater proficiency in both languages) before moving to the top tier aimed at English enrichment.

Transcript 2	Language Zone
1 Teacher (T), uses Simultaneous-Communication (spoken English and sign): Okay. Look what I did. [Reads the board:] ''Then we out van and walked.'' We need a few little words to make our sentence a complete English sentence. [Students contribute ideas.] 2 T: Trevon?	1 The teacher transitioned from the *English board,* which includes text that is a *close approximation of English,* to the language zone using her body language and eye gaze.
3 Student (S) 1, Trevon: GOT, GOT-OUT. [Uses ASL.] 4 T: Good, Trevon! 5 T: When we say 'out,' normally we say, ''we got out.'' [Fingerspells the word 'got.'] Not ''got'' [Uses an individual sign for 'got.']. We ''got out.'' [Fingerspells the words 'got out.'] 6 T: In ASL how can we sign that? ''Got out.'' [Fingerspells 'got out.'] 7 S2, Nikki: GOT-OUT [Uses ASL classifiers.] 8 T: Good, Nikki (S2)! We GOT-OUT [Uses ASL classifiers]. 9 T: Got out? Get out? [Signs 'got/get' and 'out' separately using individual, decontextualized signs.] 10 T & Students (SS): No!	3-10 S1 contributed an idea that was *clearly conveyed* and contained *ASL features,* so the teacher began working in the *middle tier* of the language zone. She begins *heightening metalinguistic awareness of ASL and English* by *comparing* the phrase in both languages, and *repeating and modeling in ASL.*
11 T: We GOT-OUT. [Uses ASL classifiers to indicate movement and context.] Understand? GOT-OUT. [Fingerspells.] GOT-OUT. [Adds English text to the interactive whiteboard.] 12 T & SS: [Reads text together in conceptual ASL:] ''So, then we got out…''	11 After *translating* the ASL phrase to English and *expressing the idea in English*, the teacher added the *close approximation of English* to the *English board.*

Scenario 3, bottom tier

The last example is drawn from a lesson in which a third grade student did not clearly express his initial idea. The interaction below demonstrates how the teacher began at the lower tier of the language zone flowchart to build shared understanding, before advancing to the middle tier, focused on metalinguistic awareness, and the top tier, aimed at English enrichment.

Transcript 3	*Language Zone*
1 Teacher using ASL (T): [Points to a picture of a carnival ride that she and the students drew on the Language Zone easel. With her finger placed on top of the picture, she imitates a spinning motion-—as if the carnival ride were moving in a circular pattern, and then points to a second picture of a large carnival swing. The class previously discussed the movement of the swing.]	1 Since the student's contribution was *not clearly conveyed*, the teacher referenced *drawings* created in the language zone *(bottom tier)* to provide the student with additional context.
2 Student-Author (SA): [Uses classifiers, space, and movement to indicate swinging to the left and right with an additional circular motion at the end of each swinging motion. References the picture on the Language Zone and places a classifier on the picture to show movement during the ride.]	2 The student author used *classifiers* and *space* in addition to the *drawings* to *get to a point of shared understanding* with his teacher and classmates.
3 T: Come stand up here and explain what you did. What did you do first?	
4 SA: [Uses classifiers to represent himself on the ride, while using additional classifiers and the picture he drew on the Language Zone to show a swinging motion.]	
5 T: But, what did you do first? Did you sit? [Uses classifiers/role-play to demonstrate buckling herself in on a ride using a shoulder harness and lap belt.]	5 The teacher role-played the scenario and increased her use of *classifiers* and *space*.
6 SA: Sat. [Uses classifiers to indicate the use of a shoulder harness.]	
7 T: [Copies SA's use of classifiers.]	
8 SA: [Shakes his head, ''yes''.]	
9 T: Did you sit or stand?	
10 SA: Sit.	10-16 The teacher asked open-ended questions to further *get to a point of shared understanding* while *not leading* the student to an
11 T: Sit…with a shoulder harness. What happened next?	
12 SA: [No response.]	

13 T: Was a cage around you? Or… what?

14 SA: [Tilts his head.]

15 T: [Points to the picture of the ride drawn on the Language Zone and references the seat.] What is this?

16 SA: [Uses classifiers to indicate a flat surface.] Almost like… [Demonstrates putting on the shoulder harness and tilts body to the side as if swinging.] Wind…

incorrect answer. When the student didn't respond, she returned to more transparent instructional options: *using pictures*, *gesturing*, and *increasing her use of classifiers.*

17 T: Oh, you felt wind on your face?! Wind. You felt it on your face.

17 The teacher *paired language and meaning.*

18 T: You both were sitting next to each other. What was next? What did you do next? [Pause.] You were sitting there waiting… what happened next?

19 SA: [Uses the same classifiers to show the swinging motion of the ride.]

18 The teacher *pursued without leading* by asking what happened next.

20 T: [Adds to the picture on the Language Zone by drawing a two-way arrow that shows the swinging motion of the ride.] Is that what happened-—swinging back and forth? [T role-plays the situation by acting as if she is secured into the seat of the ride and swinging. Then, adds the classifier to indicate the movement.]

20 The teacher continued to use *drawings, gestures, role-play, classifiers,* and *space* to *get to a point of shared understanding.*

21 SA: More. More. More.

22 T: How many?   [Pause.] Did you swing a few or many times? [A classmate begins repeating the experience by showing the movement described.]

23 SA: Five.

24 T: You swung five times?!

25 T: What's this look like? [Uses a classifier to show swinging while again pointing to the motion.]

25-29 The teacher, with the help of other students, *paired language and meaning* by labeling

26 SA: Swing.

27 T: Swing.

28 S3: S-W-I-N-G

29 SA: Swinging side to side!

the picture with the word 'swing'.

The three examples above illustrate scenarios of teachers working with students in the language zone and making decisions about what task and which instructional options to use in order to generate shared understanding, heighten metalinguistic awareness and expand and enrich English. As described above, the expansion and enrichment phase represented by the top tier is IW as it is described in the literature. D/Dhh learners may need to address different features of English than their hearing peers in this process. For example, d/Dhh learners may need explicit instruction on the use of pronouns that hearing students would not be likely to require. However, the main task and instructional options for accomplishing that task are the same at this tier. The bottom and middle tiers offer layers of support that are specifically designed to address the unique language histories of d/Dhh students. Thus, the language zone can be used to facilitate the use of IW instruction with d/Dhh learners.

Conclusion

The language zone is designed to accompany, not modify, a research-based mode of writing instruction to specifically support d/Dhh learners. It augments learning potential by including opportunities for explicit instruction in the processes of translation and revision when initial ideas are communicated using languages other than English. The task of designing and implementing writing instruction that fully considers the unique language histories of diverse d/Dhh learners can be dauntingly complex. It requires deep knowledge of language, literacy development and individual students' strengths, needs, and interests in order to recognize and respond to evidence of students' proficiency, intentions and readiness for particular kinds of instruction. The language zone flowchart is an instructional tool that supports teachers who aim to engage in this vital work of developing powerful language and literacy proficiencies among d/Dhh students. It provides a framework of support for recognizing, analyzing and responsively selecting, instructional moves that have the potential to interrupt persistent trends in low achievement among d/Dhh learners in the area of literacy.

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Note

1   'Deaf' is used to signify membership in the Deaf community, a cultural group which has a distinct set of cultural norms and values.

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